

IN THE CLAIMS

Please amend the claims as follows.

1. (Currently amended) Lighting device comprising
an at least partly transparent substrate (20), and
a light source (11) made integrally on a first face of said substrate (20), said light source (11) including at least a positive electrode (14) and a negative electrode (13) to supply electric power, interacting with each other and between which at least a luminescent layer of the organic-led type (OLED) (16, 17) is located,
said substrate (20) being able to diffuse the light generated by said organic led luminescent layer (16, 17),
a lenticular optical element (21) being associated on the opposite face of said substrate (20), ~~characterized in that~~ said lenticular optical element (21) to diffuse the light beam emitted by said light source (11) ~~comprises~~ comprising a plurality of micro-lenses (22) directly molded, by means of a pre-formed mold, on a second face of said substrate (20) opposite to the first face so as to constitute, with said organic led light source (11), an integrated structure to generate, emit and direct the light, each one of said micro-lenses (22) being coupled with a relative point of light emission (19) of said light source (11) to direct and shape the relative light beam emitted, wherein each said micro-lens has its relative center located shifted with respect to the relative point of light emission.

2. (Currently amended) Device as in claim 1, ~~characterized in that~~ wherein each of said points of light emission (19) consists of crossing points (19), or pixels, between said positive electrode (14) and said negative electrode (13).

3. (Currently amended) Device as in ~~any claim hereinbefore 1~~, ~~characterized in that~~ said micro-lenses (22) have the relative center located shifted with respect to the relative point of light emission (19) wherein each of said points of light emission comprises crossing points, or pixels, between said positive electrode and said negative electrode.

4. (Currently amended) Device as in claim 3 ~~1~~, ~~characterized in that~~ wherein said shift is achieved with respect to one and/or the other of the main axes (x, y) of the relative micro-lens (22).

5. (Currently amended) Device as in ~~any claim hereinbefore 1~~, ~~characterized in that~~ wherein at least some of said micro-lenses (22) are of the diffractive type ~~in order to~~ divert and direct the ray of light emitted by the relative point of light emission (19).

6. (Currently amended) Device as in ~~any claim hereinbefore 1~~, ~~characterized in that~~ wherein said micro-lenses (22) have a thickness of between 1 and 100 micron (μm), ~~preferably between 1 and 40 micron.~~

7. (Currently amended) Device as in ~~any claim hereinbefore 1~~, characterized ~~in that~~ wherein said micro-lenses (22) have a lateral size of between 5 and 1000 micron, ~~preferably between 10 and 300 micron.~~

8. (Currently amended) Device as in ~~any claim hereinbefore 1~~, characterized ~~in that~~ wherein the micro-lenses (22) of a relative lenticular optical element (21) are all equal to each other.

9. (Currently amended) Device as in ~~any claim from 1 to 7 inclusive~~, characterized ~~in that~~ wherein the micro-lenses (22) of a relative lenticular optical element (21) are different from each other ~~in order~~ to direct and shape the light beam emitted by the relative point of light emission (19).

10. (Currently amended) Device as in ~~any claim from 1 to 9 inclusive~~, characterized ~~in that~~ wherein said substrate (20) is made of plastic material.

11. (Currently amended) Device as in ~~any claim from 1 to 9 inclusive~~, characterized ~~in that~~ wherein said substrate (20) is made of at least partly flexible glass.

12. (Currently amended) Method to produce lighting devices comprising at least an organic led-type multi-layer light source (11) and at least an optical system (12) to diffuse and direct the light beams, comprising at least an at least partly transparent substrate (20) , at least a lenticular optical element (21) being associated with one face of said substrate (20) opposite to

the face where said light source (11) is provided, ~~characterized in that~~ comprising the steps of directly molding said lenticular optical element (21) ~~is directly molded~~, by means a pre-formed mold, on said substrate (20) to obtain a plurality of micro-lenses (22) each of which is coupled with micrometric precision at least with regard to the positioning with respect to an individual point of emission (19) of said organic led light source (11).

13. (Currently amended) Method as in claim 12, ~~characterized in that~~ wherein the molding is performed with nickel molds on which the impressions corresponding to the lenticular optical matrix are obtained with the step and repeat technique.

14. (Currently amended) Method as in claim 12 ~~or 13~~, ~~characterized in that~~ wherein said molding is performed hot.

15. (Currently amended) Method as in claim 14, ~~characterized in that~~ wherein the hot molding is performed on an industrial scale with ~~the~~ a hot-embossing technique.

16. (Currently amended) Method as in claim 12 ~~or 13~~, ~~characterized in that~~ wherein said molding is performed cold.

17. (Currently amended) Method as in ~~any claim from 12 to 16 inclusive~~, ~~characterized in that~~ wherein the micro-lenses (22) of a same lenticular optical element (21) are all made equal to each other.

18. (Currently amended) Method as in ~~any claim from 12 to 16 inclusive~~, characterized in that wherein the micro-lenses (22) of a same lenticular optical element (21) are made different from each other so as to perform specific functions of directing and shaping the light beam emitted by the relative point of light emission (19).

19. (Currently amended) Method as in ~~any claim from 12 to 18 inclusive~~, characterized in that wherein said molding takes place after said substrate (20) has been associated with the light source (11).

20. (Currently amended) Method as in ~~any claim from 12 to 18 inclusive~~, characterized in that wherein said molding takes place before the light source (11) has been associated with said substrate (20).

21. (Currently amended) Method as in ~~any claim from 12 to 20 inclusive~~, characterized in that wherein the micro-lenses (22) of said lenticular optical element (21) are positioned shifted with respect to the corresponding crossing point, or pixel, (19) between a positive electrode (14) and a negative electrode (13).

22. (New) Device as in claim 1, wherein said micro-lenses have a thickness of between 1 and 40 micron (μm).

23. (New) Device as in claim 1, wherein said micro-lenses have a lateral size of between 10 and 300 micron (μm).